

"Z" AXIS LOGIC

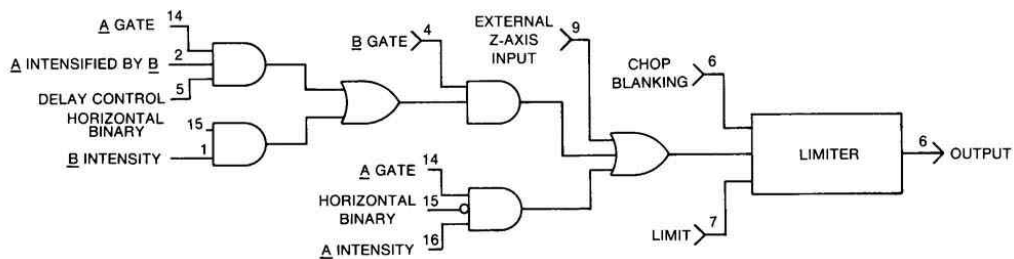
DESCRIPTION

The 155-0012-00 is a Z-axis logic control circuit. The part is under the control of the horizontal switch drive. It properly selects A intensity or A intensified by B.

FEATURES

- 4 current inputs
- 1 current output
- 4 logic inputs
- Chopped blanking
- Fast limiting of composite signal.
- Slow sweep speed limiting to prevent CRT phosphor burn.

BLOCK DIAGRAM



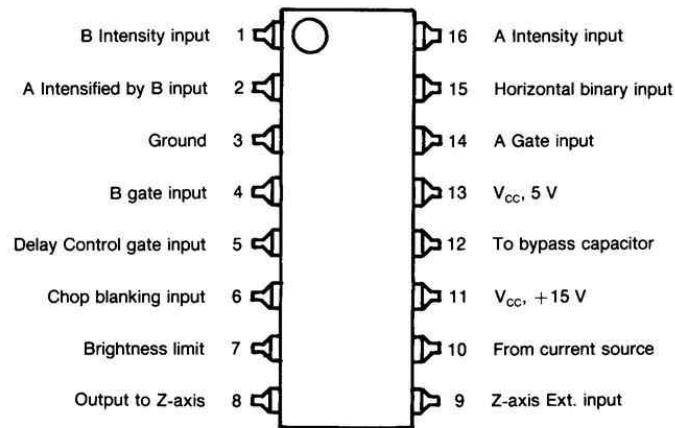
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ABSOLUTE MAXIMUMS

Environmental

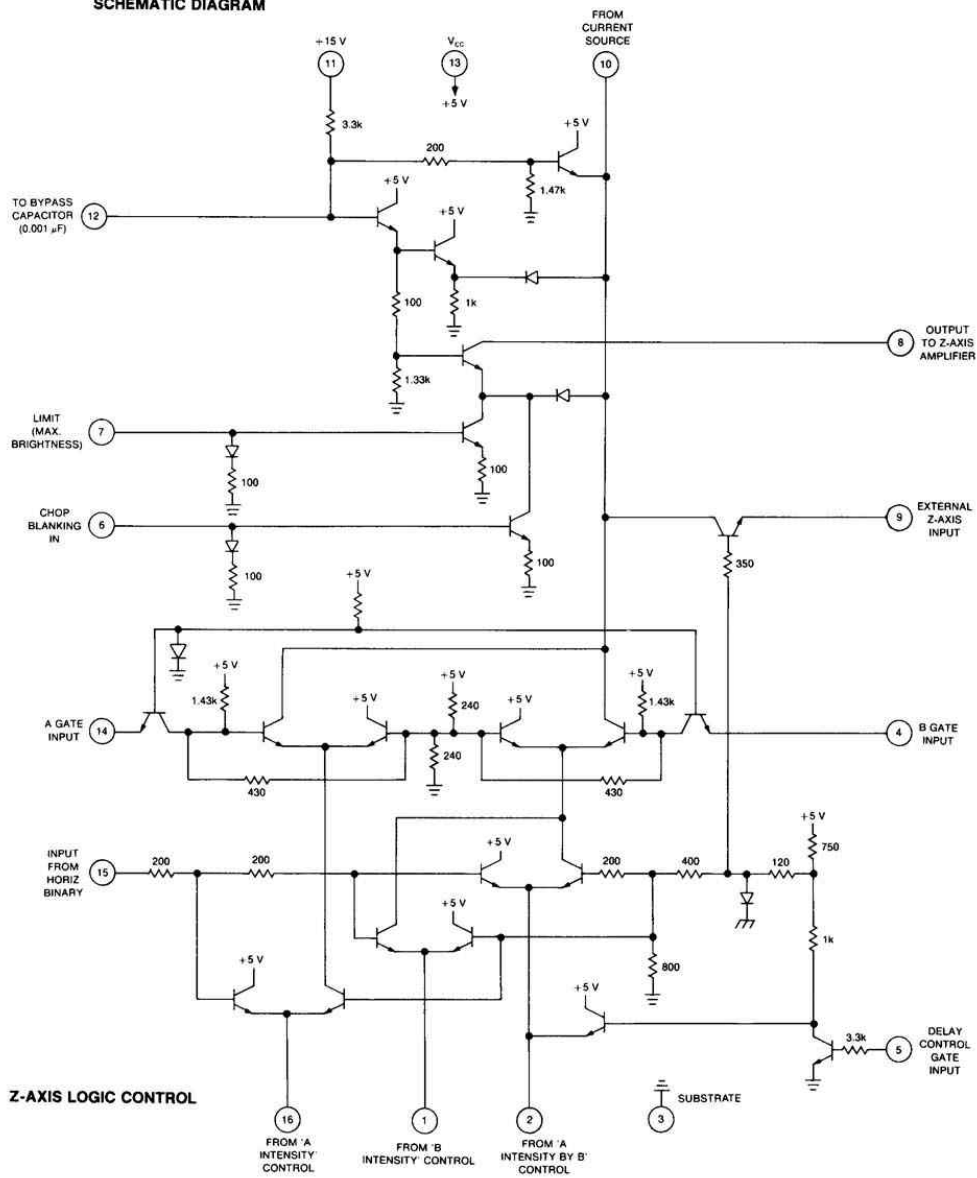
| Symbols | Identifications | Values | Units |
|-----------|---------------------------------------|-------------|-------|
| T_{stg} | Storage temperature, range. | -55 to +125 | °C |
| T_A | Operating ambient temperature, range. | 0 to +70 | °C |

PIN CONNECTIONS



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SCHEMATIC DIAGRAM



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ELECTRICAL CHARACTERISTICS

| PIN #'s | IDENTIFICATION | NOTES AND TEST CONDITIONS | MIN | MAX | UNITS |
|-----------|---|--|-----|-------|-------|
| Pin 4 | B gate; current | Logical 0 | 2.3 | | mA |
| Pin 4 | B gate; current | Logical 1 | | 0.5 | mA |
| Pin 5 | Delay control; voltage | Logical 0 | | 0.600 | V |
| Pin 5 | Delay control; voltage | Logical 1 | 0.8 | | V |
| Pin 14 | A gate; current | Logical 0 | 2.3 | | mA |
| Pin 14 | A gate; current | Logical 1 | | 0.5 | mA |
| Pin 15 | Horizontal binary; voltage | Logical 0 | | 0.2 | V |
| Pin 15 | Horizontal binary; voltage | Logical 1 | 0.7 | | V |
| Pin 14 | Output (pin 8) risetime; input at A gate (pin 14) | | | 4.6 | ns |
| Pin 4 | Output (pin 8) risetime; input at B gate (pin 4) | | | 3.9 | ns |
| Pin 6 | Output (pin 8) risetime; input at chop blanking (pin 6) | | | 2.6 | ns |
| Pin 9 | Output (pin 8) risetime; input at external input (pin 9) | | | 3.3 | ns |
| Pin 14 | Output (pin 8) falltime; input at A gate (pin 14) | | | 4.2 | ns |
| Pin 4 | Output (pin 8) falltime; input at B gate (pin 4) | | | 3.6 | ns |
| Pin 6 | Output (pin 8) falltime; input at chop blanking (pin 6) | | | 2.3 | ns |
| Pin 9 | Output (pin 8) falltime; input at external input (pin 9) | | | 1.4 | ns |
| Pins 14-8 | Propagation delay, A gate input (inverting) | For negative-slope input transition | | 1.9 | ns |
| Pins 4-8 | Propagation delay, B gate input (inverting) | For negative-slope input transition | | 1.3 | ns |

ELECTRICAL CHARACTERISTICS (cont)

| PIN #'s | IDENTIFICATION | NOTES AND TEST CONDITIONS | MIN | MAX | UNITS |
|-----------------------|--|--|------------|------------|--------------|
| Pins 6-8 | Propagation delay, chop blanking input (inverting) | For negative-slope input transition | | 1.4 | ns |
| Pins 9-8 | Propagation delay, external input (noninverting) | For negative-slope input transition | | 2.9 | ns |
| Pins 14-8 | Propagation delay, A gate input (inverting) | For positive-slope input transition | | 4.0 | ns |
| Pins 4-8 | Propagation delay, B gate input (inverting) | For positive-slope input transition | | 6.5 | ns |
| Pins 6-8 | Propagation delay, chop blanking input (inverting) | For positive-slope input transition | | 4.4 | ns |
| Pins 9-8 | Propagation delay, external input (noninverting) | For positive-slope input transition | | 0.94 | ns |
| h_{fb} Pins 16-8 | Current gain from A intensity input | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .87 | 1.01 | |
| h_{fb} Pins 1-8 | Current gain from B intensity input | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .87 | 1.01 | |
| h_{fb} Pins 2-8 | Current gain from A intensified by B input | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .87 | 1.01 | |
| h_{fb} Pins 9-8 | Current gain from external input | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .89 | 1.01 | |
| h_{fb} Pins 6-8 | Current gain from chop blanking | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .92 | 1.01 | |
| h_{fb} Pins 7-8 | Current gain from limit | $I = 1.0 \text{ mA}$ and $I = 5.0 \text{ mA}$ | .92 | 1.01 | |

Reliability

λ , failure rate $\leq .02\%/1\text{K hours at } 75^\circ\text{C Tj}$